LIQUID CRYSTAL DISPLAY DEVICE

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Abstract of **JP59195627**

PURPOSE:To obtain a good gradation display characteristics over a wide temperature range and to obtain a liquid crystal display device proper to an electronic view finder or the like for a portable apparatus by removing a variation component of incident light amount included in an electric signal and controlling effective voltage to be applied so as to hold the size of the signal at a fixed value. CONSTITUTION:A photodetector 21 outputs a signal Vo proportional to the intensity of light transmitted through a liquid crystal layer 1. When voltage VSR applied to transparent electrodes 15, 16 is extremely high for a using temperature, Vo>Vref is formed and a signal for reducing the VSR is applied from a comparator 24 to a power supply 26. Consequently, the applied voltage is suppressed and the VSR is set up so that It=50% is formed. When the VSR is extremely low, Vo<Vref is formed and a signal for increasing the VSR is applied to the power supply 26. Thus, the VSR is controlled to an optimum value in accordance with the using temperature. Simultaneously, voltage Vs to be applied to a display cell 11 is also controlled so that the most preferable gradation characteristics can be obtained.